

REMARKS

Claim 1 is amended by restricting scopes of R^1 - R^5 . Phenyl is now excluded from the scope of R^2 as R^1 is phenyl or methyl, which will overcome the cited References U and V (Kang et al). R^3 and R^4 are independently restricted to methyl from alkyl of C1-C9, and R^3 - R^4 -N to piperidine from three-to-eight-membered heterocycle. Accordingly, claim 1 is no longer anticipated by the cited Reference W (Carreno et al). Moreover, R^5 is restricted to methyl from alkyl of C1-C6. Amended claim 1 now also comports with the embodiments described in the specification.

In the present invention, Applicant provides a series of artificial aminothiol compounds exhibiting effect in catalyzing an asymmetric addition reaction of aldehyde superior to almost all conventional aminothiol compounds. On the basis of aldehyde, less than 1% of the aminothiol compounds of the present invention are necessary to reach high e.e. values more than 90%. For example, the following compounds:

6f4c ($R^1 = R^2 = i\text{-propyl}$, $N\text{-}R^3\text{-}R^4 = \text{pyrrolidinyl}$, $R^5 = H$),

6g5c ($R^1 = i\text{-propyl}$, $R^2 = Ph$, $N\text{-}R^3\text{-}R^4 = \text{piperidyl}$, $R^5 = H$), and

5g5c ($R^1 = Bn$, $R^2 = Ph$, $N\text{-}R^3\text{-}R^4 = \text{piperidyl}$, $R^5 = H$)

can easily achieve e.e. value higher than 99% in an amount less than 1% on the basis of aldehyde. The other aminothiol compounds of the present invention can also present good effects when applied to the addition as described in the specification. That is, the present invention indeed contributes to reducing cost for producing alkylmetal in asymmetric addition reactions.

Applicant believes that the foregoing is a complete response to the Office Action, and respectfully requests that a timely Notice of Allowance be issued in this case.

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Reply to Office Action of 11/29/2004

Respectfully,

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